

CLAIMS

I claim:

1 1. A tool adapted to finish end pieces of roofing panels comprising:
2 a table adapted to receive a roofing panel, and
3 a first notching device and a second notching device, each said notching device
4 being adapted to remove a notch from side walls of the roofing panel; wherein
5 at least one of said notching devices is movable relative to the other said notching
6 device, so that a notch formed by said first notching device can be made at a different
7 longitudinal position along a first side wall of the roofing panel relative to a notch formed
8 by said second notching device, thereby enabling variation of an angle between said
9 notch formed by said first notching device and said notch formed by said second
10 notching device.

1 2. The tool as defined in claim 1 wherein:
2 said tool further comprises a pan shear pivotally mounted on said table.

1 3. The tool as defined in claim 1 wherein:
2 said tool further comprises a hemmer pivotally mounted on said table.

1 4. The tool as defined in claim 1 wherein:
2 said table comprises two side walls, at least one of said side walls having an
3 elongated opening therein to accommodate a travel paths of an associated one of said

4 notching devices.

1 5. The tool as defined in claim 1 wherein:

2 said table comprises mounting legs, said mounting legs being adjustable in length

3 so that said table can be mounted stably on angled surfaces.

1 6. The tool as defined in claim 1 wherein:

2 each said notcher comprises a bottom die, said bottom die comprising at least one

3 supporting projection, said supporting projection being adapted to enter an open area

4 of a female side wall of the roofing panel.

1 7. The tool as defined in claim 1 wherein:

2 each said notcher comprises a bottom die and a top die, said bottom die

3 comprising at least one supporting projection, said supporting projection being adapted

4 to enter an open area of a female side wall of the roofing panel, and said top die

5 comprising a slot to receive said supporting projection of said bottom die, so that a clean

6 cut of the side wall of the roofing panel is achieved.

1 8. The tool as defined in claim 1 wherein:

2 said hemmer comprises

3 a brake handle,

4 a brake plate,

5 a hold down, and
6 an angled panel support; wherein
7 an exposed tongue of a notched roofing panel is secured on said panel support
8 with said hold down, and pressure is applied to the tongue by means of said brake
9 handle so that the tongue is bent around a brake pivot on an end of said panel support.

1 9. The tool as defined in claim 8 wherein:
2 after an initial bending operation, the panel is repositioned on a top of said panel
3 support so that the tongue can be completely flattened.

1 10. The tool as defined in claim 8 wherein:
2 after an initial bending operation, said panel support is retracted so that said brake
3 handle can continue to apply pressure to the tongue of the panel so as to completely
4 flatten the tongue.

1 11. The tool as defined in claim 1 wherein:
2 said notchers are connected to each other through a linkage mechanism so that
3 said notchers move in unison to desired positions.

1 12. The tool as defined in claim 11 wherein:
2 said linkage mechanism comprises a plurality of link arms pivotally connected to
3 each other and to said notchers.

1 13. A tool adapted to notch a side wall of a roofing panel comprising:
2 a bottom die,
3 a top die, and
4 an actuation means to drive said bottom die and said top die toward each other;

5 wherein

6 said bottom die comprises at least one supporting projection, said supporting
7 projection being adapted to enter an open area of a female side wall of the roofing
8 panel, and

9 said top die comprises a slot to receive said supporting projection of said bottom
10 die, so that a clean cut of the side wall of the roofing panel is achieved.

1 14. The tool as defined in claim 13 wherein:

2 said tool is installed in line with a roll forming machine.

1 15. The tool as defined in claim 14 wherein:

2 said actuation means is driven by a hydraulic drive.

1 16. The tool as defined in claim 14 wherein:

2 said actuation means is driven by a pneumatic drive.

1 17. A tool adapted to hem an exposed tongue of a notched roofing panel

2 comprising:

3 a brake handle,

4 a brake plate,

5 a hold down, and

6 an angled panel support; wherein

7 the exposed tongue of the notched roofing panel is secured on said panel support

8 with said hold down, and pressure is applied to the tongue by means of said brake

9 handle so that the tongue is bent around a brake pivot on an end of said panel support.

1 18. The tool as defined in claim 17 wherein:

2 after an initial bending operation, the panel is repositioned on a top of said panel

3 support so that the tongue can be completely flattened.

1 19. The tool as defined in claim 17 wherein:

2 after an initial bending operation, said panel support is retracted so that said brake

3 handle can continue to apply pressure to the tongue of the panel so as to completely

4 flatten the tongue.